

Title (en)

ENHANCEMENT - DEPLETION SEMICONDUCTOR STRUCTURE AND METHOD FOR MAKING IT

Title (de)

ANREICHERUNGS- VERARMUNGSHALBLEITERSTRUKTUR UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

STRUCTURE A SEMICONDUCTEUR A ENRICHISSEMENT- APPAUVRISSEMENT ET PROCEDE DE FABRICATION DE LA STRUCTURE

Publication

EP 1834360 A2 20070919 (EN)

Application

EP 05850866 A 20051213

Priority

- IB 2005054219 W 20051213
- EP 04300956 A 20041230
- EP 05850866 A 20051213

Abstract (en)

[origin: WO2006070297A2] A ED-HEMT structure includes a buffer layer (4) including a doped layer (18), a channel layer (6), a barrier layer (8), and a second doped layer (20). An enhancement mode HEMT gate (12) is formed in a via extending through the second doped layer (20) and a depletion mode HEMT structure is formed over the second doped layer (20). The layer sequence allows the formation of both enhancement and depletion mode HEMTs in the same structure with good properties.

IPC 8 full level

H01L 27/06 (2006.01); **H01L 27/088** (2006.01)

CPC (source: EP KR US)

H01L 27/06 (2013.01 - KR); **H01L 27/0605** (2013.01 - EP US); **H01L 27/088** (2013.01 - KR); **H01L 27/0883** (2013.01 - EP US); **H01L 27/095** (2013.01 - EP US); **H01L 29/7783** (2013.01 - EP US)

Citation (search report)

See references of WO 2006070297A2

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DOCDB simple family (publication)

WO 2006070297 A2 20060706; **WO 2006070297 A3 20061005**; CN 101095233 A 20071226; EP 1834360 A2 20070919; JP 2008527687 A 20080724; KR 20070093074 A 20070917; TW 200636997 A 20061016; TW I415259 B 20131111; US 2009026501 A1 20090129

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